

Patent Abstracts of Japan

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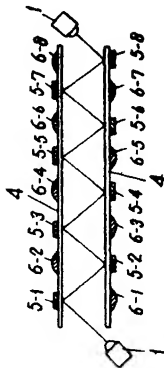
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TITLE : DETECTION AND DETECTOR OF  
OPTICAL ATTENUATION



ABSTRACT : PURPOSE: To make it possible to detect the optical attenuation in high sensitivity, while eliminating the misjudgement due to contamination of a reflecting mirror, by projecting in two directions for measurement the smoke concentration and by effecting multiple reflection with the use of a half-mirror.

CONSTITUTION: The signals, which have come from respective light sources 1 so that they are detected through a half-mirror 4 by detectors 5-1-5-8, are denoted at  $T_i$ , and the signals, which are detected by scattering optical detectors 6-1-6-8, are denoted at  $S_j$ . The transmitted optical signals and the scattered optical signals are added so that the added values are monitored. If in this instance smoke or the like steals into the clearance between the mirrors, the light is scattered so that the summation  $\sum T_i$  is reduced whereas the summation  $\sum S_j$  is increased. As a result, the added values are abruptly increased so that the detections of high sensitivity can be performed.

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